

We claim:

1. A composite elastic material having a first direction and a second direction, the second direction being perpendicular to the first direction,
5 at least a portion of the composite elastic material comprising:
a flexible nonwoven layer having a nonwoven bond pattern comprising a plurality of bond elements;
a layer of substantially parallel elastomeric filaments adjacent to a surface of the nonwoven layer; and
10 a bonding component that joins the elastomeric filaments to the adjacent surface of the nonwoven layer in a face to face configuration;
where the bond elements have a first bond dimension relative to the first direction and a second bond dimension relative to the second direction and where the first bond dimension is greater than the second
15 bond dimension and where the first and second bond dimensions of the bond elements of the nonwoven bond pattern define a nonwoven bond pattern dimension ratio such that the nonwoven bond pattern dimension ratio is greater than 1.
2. The composite elastic material of claim 1, where the elastomeric
20 filaments are parallel to the first direction.
3. The composite elastic material of claim 1, where the elastomeric filaments are parallel to the second direction.
4. The composite elastic material of claim 1, where the bonding
component is an adhesive.
- 25 5. The composite elastic material of claim 1, where the bonding component is a layer of elastomeric meltblown fibers.
6. The composite elastic material of claim 1, further comprising a second flexible nonwoven layer having a nonwoven bond pattern
30 comprising a plurality of bond elements where the bond elements have a first bond dimension relative to the first direction and a second bond dimension relative to the second direction and where the first and second bond dimensions of the bond elements of the nonwoven bond pattern define a nonwoven bond pattern dimension ratio such that the nonwoven bond pattern dimension ratio is greater than 1

5 7. The composite elastic material of claim 1, further comprising a laminate bond pattern comprising a plurality of laminate bond elements having a first dimension relative to the first direction and a second dimension relative to the second direction and where the first and second dimensions of the laminate bond elements of the laminate bond pattern define a laminate bond pattern dimension ratio.

8. The composite elastic material of claim 7, where the laminate bond pattern dimension ratio is greater than 1.

10 9. The composite elastic material of claim 7, where the laminate bond pattern dimension ratio is less than 1.

10. The composite elastic material of claim 7 where the laminate bond elements are thermal bonds.

11. The composite elastic material of claim 7 where the laminate bond elements are ultrasonic bonds.

15

12. Method of producing a composite elastic material with a first direction and a second direction, the second direction being perpendicular to the first direction, the method comprising the steps of :

- 20 a) providing at least one flexible nonwoven layer having a nonwoven bond pattern comprising a plurality of bond elements;
- b) providing a layer of substantially parallel elastomeric filaments adjacent to a surface of the facings layer;
- c) providing a bonding component; and
- 25 d) joining the flexible nonwoven layer to the layer of elastomeric filaments in a face to face configuration;

30 where the bond elements have a first bond dimension relative to the first direction and a second bond dimension relative to the second direction and where the first and second bond dimensions of the bond elements of the nonwoven bond pattern define a nonwoven bond pattern dimension ratio such that the nonwoven bond pattern dimension ratio is greater than 1.

13. The method of claim 12, where the elastomeric filaments are parallel to the first direction.

14. The method of claim 12, where the elastomeric filaments are parallel to the second direction.

15. The method of claim 12, where the bonding component is an adhesive that is applied to the surface of the nonwoven layer.

5 16. The method of claim 12, where the bonding component is a layer of elastomeric meltblown fibers that is applied to layer of elastomeric filaments.

10 17. The method of claim 12, further comprising the steps of providing a second flexible nonwoven layer having a nonwoven bond pattern comprising a plurality of bond elements where the bond elements have a first bond dimension relative to the first direction and a second bond dimension relative to the second direction and where the first bond dimension is greater than the second bond dimension and where the nonwoven bond pattern dimension ratio is greater than 1.

15 18. The method of claim 17, where the joining of the nonwoven facing layer to the elastomeric filaments and the elastomeric filaments to the second nonwoven facing layer occurs by passing the composite elastic material into a nip formed between an anvil calender roller and a bonding calender roller.

20 19. The method of claim 17, where the bonding calender roller is a point un-bonded calender roller.

20. The method of claim 17, where the bonding calender roller is a smooth calender roller.

25 21. The method of claim 12, further comprising the step of bonding the composite elastic material with a laminate bond pattern comprising a plurality of laminate bond elements having a first dimension relative to the first direction and a second dimension relative to the second direction and where the first and second dimensions of the laminate bond elements of the laminate bond pattern define a laminate bond pattern dimension ratio.

30 22. The method of claim 21, where the laminate bond pattern dimension ratio is greater than 1.

23. The method of claim 21, where the laminate bond pattern dimension ratio is greater than 1.

KC 16124

24. The method of claim 21, where the laminate bond elements are thermal bonds.

25. The method of claim 21, where the laminate bond elements are ultrasonic bonds.